Vi101/Vi205/Vi302/Vi305/Vi405/Vi605
Digital Recorder
User Manual

Intelligent Security and Fire Ltd

Product ranges covered by this manual

Vi101	Vi302	Vi305
Vi205	Vi405	Vi605

Document Reference	Date	Firmware
Vi610f.doc	04/03/2008	From Vi0XXc20

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1 Start Here

Please fill in the warranty fax-back form on page 67 and return it to Videoswitch

- The Vi101, Vi205, Vi302, Vi405 and ViX05 digital recorders from Videoswitch are part of the ViX05 range
- These products are designed to be easy to use whilst offering high quality digital video recording and playback, primarily for CCTV security applications.
- The video images from all connected cameras are continuously recorded onto the built-in hard drives. When the drives are full, the ViX05 keeps on recording, overwriting the oldest images.
- Images are retained for a specified user programmable number of days, typically 31. All images recorded within the period will be available for replay. Older image are no longer available.
- Several methods are provided for finding the recorded images you want quickly, including date/time searches and activity or alarm event searches
- The built-in CD writer allows a selected part or parts of the recorded information to be written onto a CD, typically to back-up an incident for use as evidence by the Police.
- The recording process continues all the time, even when playing back or writing to CD.
- Audio recording is standard on the Vi205, Vi405 and Vi605.
- Ethernet is also a standard feature allowing remote viewing via a local area network (LAN) or via Broadband Ethernet
- An optional dial-up module allows images to be viewed on a PC via a telephone line

Note:

This manual covers a range of products and therefore describes features that do not exist in all models.

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1.1 Connecting Up the Vi101

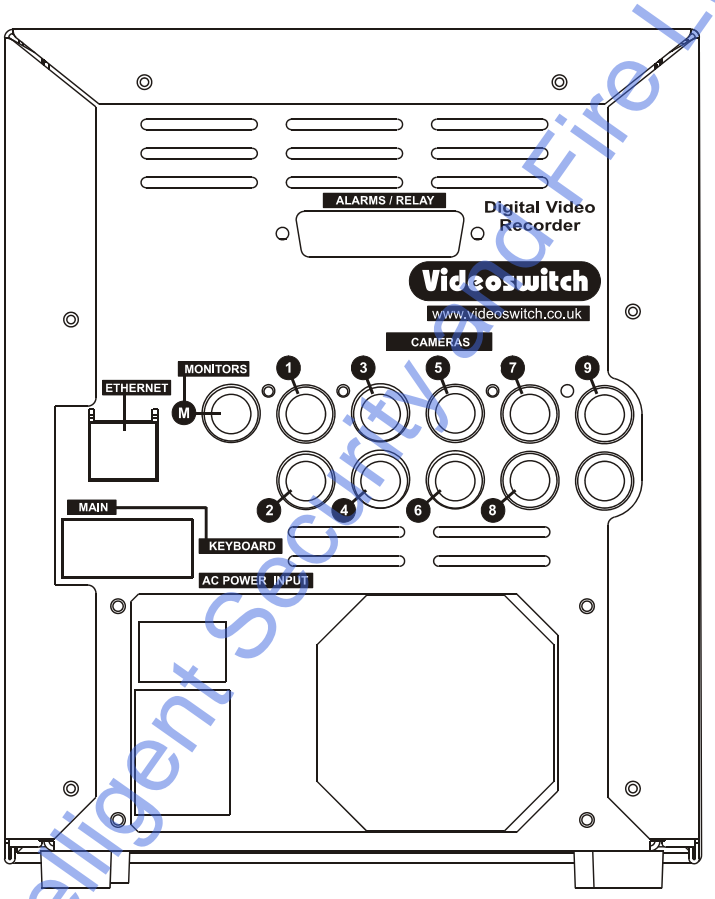
For a standard digital recording system you will need

The V101 recorder

Some cameras with lenses

A video monitor (with BNC composite video input).

BNC cables



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Connect the monitor output (MAIN) of the Vi101 to a Video Monitor using a BNC cable

Make sure that the monitor termination is switched on (i.e. to 75 Ohms)

Connect a camera to Camera Input 1 on the Vi101 using a BNC cable

Connect further cameras to Inputs 2,3,4 etc

Make sure that the voltage select switch is set to suit the mains supply. The setting required in UK and Europe is normally 230Vac.

Connect the mains power using the mains cable provided

1.2 Connecting Up the Vi205

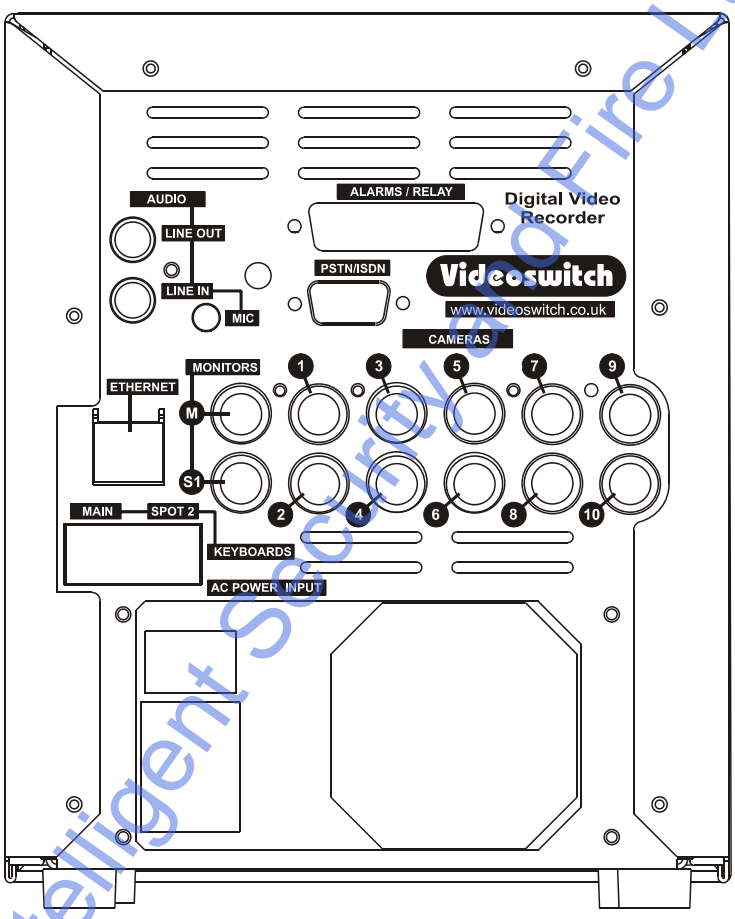
For a standard digital recording system you will need

The Vi205 recorder

Some cameras with lenses

A video monitor (with BNC composite video input).

BNC cables



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Connect the monitor output (MAIN) of the Vi205 to a Video Monitor using a BNC cable

Make sure that the monitor termination is switched on (i.e. to 75 Ohms)

Connect a camera to Camera Input 1 on the Vi205 using a BNC cable

Connect further cameras to Inputs 2,3,4 etc

Make sure that the voltage select switch is set to suit the mains supply. The setting required in UK and Europe is normally 230Vac.

Connect the mains power using the mains cable provided

1.3 Connecting up the Vi302/Vi305

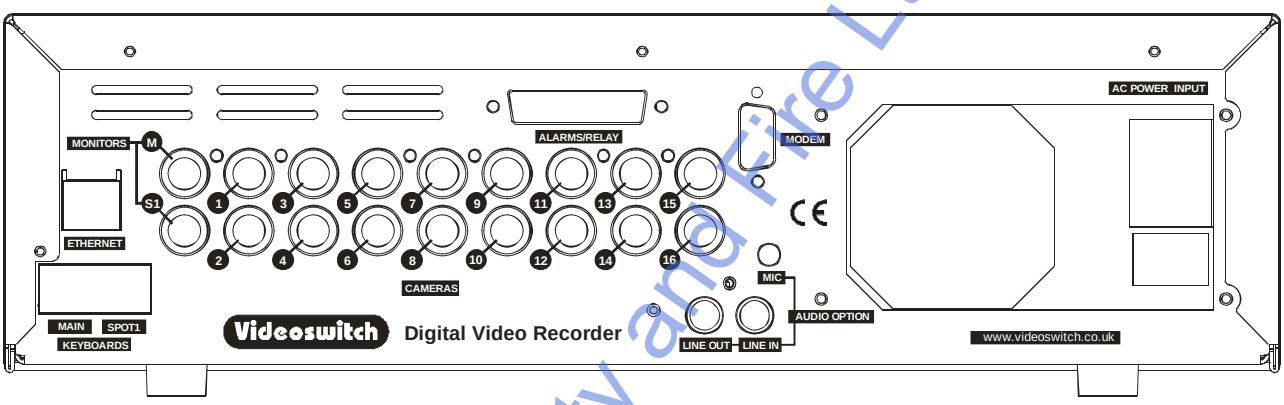
For a standard digital recording system you will need

The Vi302 or Vi305 recorder

Some cameras with lenses

A video monitor (with BNC composite video input)

BNC cables



Connect the monitor output (MAIN) of the Vi302/Vi305 to a Video Monitor using a BNC cable

Make sure that the monitor termination is switched on (i.e. to 75 Ohms)

Connect a camera to Camera Input 1 on the Vi302/Vi305using a BNC cable

Connect further cameras to Inputs 2,3,4 etc

Make sure that the voltage select switch is set to suit the mains supply. The setting required in UK and Europe is normally 230Vac.

Connect the mains power using the mains cable provided

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1.4 Connecting up the Vi405

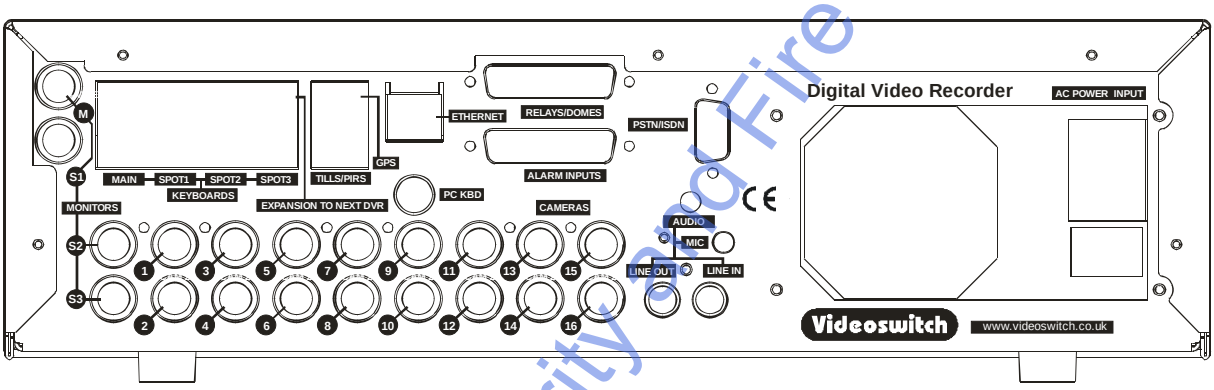
For a standard digital recording system you will need

The Vi405 recorder

Some cameras with lenses

A video monitor (with BNC composite video input)

BNC cables



Connect the monitor output (MAIN) of the Vi405 to a Video Monitor using a BNC cable

Make sure that the monitor termination is switched on (i.e. to 75 Ohms)

Connect a camera to Camera Input 1 on the Vi405 using a BNC cable

Connect further cameras to Inputs 2,3,4 etc

Make sure that the voltage select switch is set to suit the mains supply. The setting required in UK and Europe is normally 230Vac.

Connect the mains power using the mains cable provided

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1.5 Connecting up the Vi605

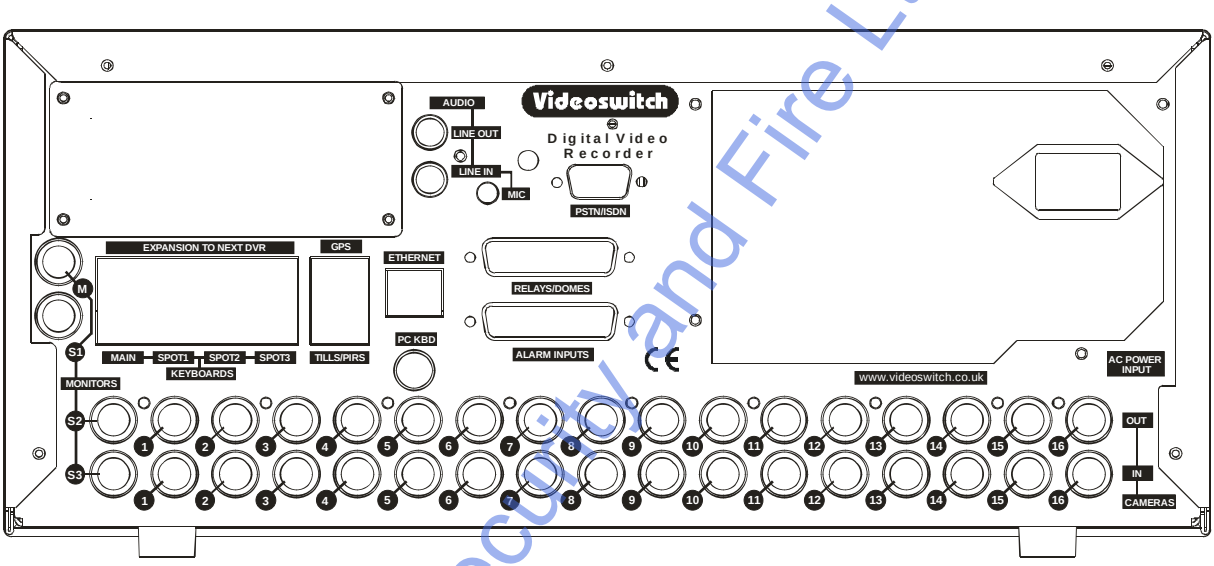
For a standard digital recording system you will need

The Vi605 recorder

Some cameras with lenses

A video monitor (with BNC composite video input)

BNC cables



Connect the monitor output (MAIN) of the Vi605 to a Video Monitor using a BNC cable

Make sure that the monitor termination is switched on (i.e. to 75 Ohms)

Connect a camera to Camera Input 1 on the Vi605 using a BNC cable

Connect further cameras to Inputs 2,3,4 etc

Make sure that the voltage select switch is set to suit the mains supply. The setting required in UK and Europe is normally 230Vac.

Connect the mains power using the mains cable provided

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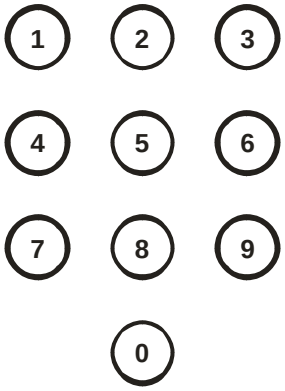
1.6 Setting Date/Time

For proper operation of the ViX05 Digital Recorder it is essential that the date and time are set correctly.

If the system clock has an invalid date or time when the ViX05 is powered up (or at any time during operation), the date and time setting window will be automatically displayed

If this occurs, use the number keys to enter the date and time.



The format for the date and time is **DD/MM/YY HH:MM:SS** where:

- DD is the day of the month (00 to 31),
- MM is the month (01 to 12),
- YY is the year (e.g. 04 for the year 2004),
- HH is the hour in 24-hour format (00 to 23),
- MM is the number of minutes past the hour (00 to 59) and
- SS is the number of seconds past the minute (00 to 59).

The arrow keys may be used to move the cursor to different positions if only some digits need changing:

Press OK to finish:

If you need to adjust the time and date at any other time press the **MENU** key and press the right arrow key to enter the **Date/Time** menu. Note that the time is automatically adjusted forwards or backwards by an hour at the appropriate dates to take account of British Summertime so no user action is required.

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1.7 Recording

The ViX05 Digital Recorder should now be fully operational and recording images from all cameras. The default image retention period is 31 days unless set otherwise in the menu.

1.8 Routine Checks

If the ViX05 is *not* recording, the message **RECORDING STOPPED** will be displayed on the video monitor. This should only happen if there is no video, if no hard drive is fitted or if it is faulty, or if record timers have been set to disable recording.

Although the system is intended for continuous un-attended operation**, it is recommended that the user regularly check that images from all cameras replay correctly.** Any potential problems with the cameras or recording system will then be detected as soon a possible, rather than continuing un-noticed until a critical incident needs to be recalled from the system.

Similarly, **when a CD has been created you should check that it plays back correctly**, before the images on the hard drive in the ViX05 become over-written. The CD may be checked by either by playing it on the ViX05 or on a PC.

1.9 Care of the Hard Drive(s)

A hard drive is a delicate mechanical item that should be handled with care. Before moving a ViX05 that has been powered up, or removing a hard drive, remove power and **wait for 30 seconds for the drive to stop spinning**. This is a precaution to avoid possible damage to the hard drive.

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1.10 Critical Alerts

The ViX05 constantly monitors the hard drive, camera inputs and system so that detected fault conditions will be reported to the user as soon as possible by means of a “critical alert” message on the screen. Alerts are also added to the event list.

- **FailTest** This alert indicates that the self-test has failed – try the following
  - Press the HELP key then the MON key twice, to call up the “INFO-2 Status” screen. One of a number of fault conditions may be noted.
  - If a checksum error is reported, enter the menu, change any setting and return to LIVE mode so that settings are saved. Try changing a password also.
  - Switch off the ViX05, wait 10 seconds and switch on again.
  - Try a power-on reset
  - If the problem persists, contact your supplier.
- **HD1, 2,3 Fail** This alert indicates that a hard drive is not working.
  - Check that the drive drawers are correctly fitted
  - Check the lock in the drive drawer is turned full counter-clockwise
  - Press the HELP key then the MON key three times, to call up the “INFO-3 Drives” screen. Press **OK** to rescan the drives.
  - Check the **DISC ACTIVITY** LED is flickering
  - Check that the red **DISC POWER** led it lit.
- **HD1, 2,3 SMART** This alert indicates that the hard drive may stop working soon
  - The SMART monitoring detects imminent failure of a hard drive, so if this warning occurs, the drive should be changed at the earliest opportunity.

To cancel a critical alert, press the **FIND** key several times until the “**FIND-3 Event**” screen is displayed.

View the recent alerts (press **TAG** to see latest). Press **OK** to cancel critical alerts.

Note that if the alert condition persists, the alert message will re-appear.

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2 HELP

2.1 Context sensitive on-line help

The Vix05 Digital Video Recorder (DVR) includes a built-in help system that provides information about all the menu options and screen modes. Most of the information in this manual is available in this help system.

Just press the **HELP** key at any time to call up information on the currently displayed screen.

Press these keys to scroll through the help information.

Press **HELP** again to return to the screen or Manu item that you were at prior to entering the HELP mode.

2.2 INFO screens

While in HELP mode, you can press the **MON** key to view information about the DVR via a number of information screens:

Press the **MON** key to cycle through these screens:

2.2.1 INFO-1 Configuration

This screen displays the model, serial number and firmware revision.

2.2.2 INFO-2 Status

This screen displays the current system status, including alarms and Ethernet/modem connections.

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2.2.3 INFO-3 Drives

This screen shows the type and size of CD and hard drives fitted. The SMART disc monitoring status is also displayed. Drives can be re-scanned by pressing the **OK** key.

2.2.4 INFO-4 Record

Information related to the record process is displayed here, including image update rate and the expected number of day's data retention.

2.2.5 INFO-5 Play

Information related to the currently displayed play image's displayed here, including image date/time, number and authentication status.

2.2.6 INFO-6 Remote

Information related remote access is displayed here, which can be useful in diagnosing remote access issues

---

2.2.7 INFO-7 Ethernet

The Vi101, Vi205, Vi302 and Vi305 have this screen that can be useful in diagnosing network issues.

To return to viewing live images, press this key:

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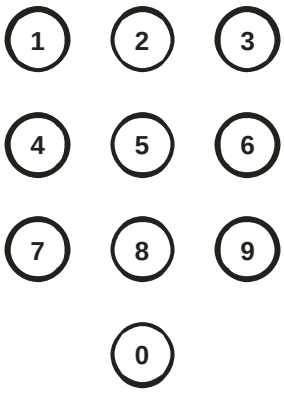
3 LIVE

Press this key to view live images on the main monitor.

This key may be pressed at any time to exit from any other screen.

3.1 Viewing Full Screen Images

Select full screen views of different cameras on the main monitor by pressing the **NUMBER** keys:



To select cameras 1 to 9 either press the required number and wait a moment for the camera to select, Alternatively enter 01, 02, 03 etc.

To select cameras 10 to 16, enter the number 10 to 16.

To step forwards or backwards through the cameras, press one of these keys:

3.2 Quad Display

Select quad display on the main monitor by pressing the **QUAD** key. Cameras 1, 2, 3 and 4 will be displayed together.

Press again to see cameras 5, 6, 7 and 8. Successive presses will select the next set of four camera images.

Press a number key to revert to full screen display of one camera.

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3.3 Multi-Screen

Select 9-camera Multi-Screen display on the main monitor by pressing the **MULTISCREEN** key. Press again to display a 16-camera multi-screen image.

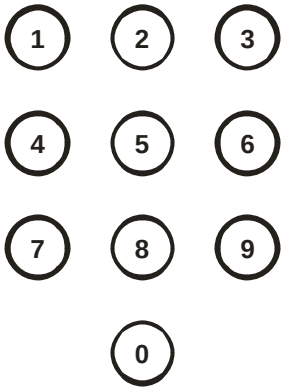
Press a number key to revert to full screen display of one camera.

3.4 Spot monitor(s)

Press the **MON** key to select a spot monitor (displayed on bottom right of screen prior to the camera number).

Press **MON** again to step through the monitor options. Note that the main monitor is the default, and only the camera number is displayed.

Select the camera to be displayed on the selected monitor by pressing the **NUMBER** keys:



To select cameras 1 to 9 either press the required number and wait a moment for the camera to select, Alternative, enter 01, 02, 03 etc.

To select cameras 10 to 16, enter the number 10 to 16.

To step forwards or backwards through the cameras, press one of these keys:

3.5 Tagging Images

If you something occurs that you may wish to go back to, press the TAG key to create an event in the event log. This makes it easy to get back to the same point using the **FIND-3 Events** screen.

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4 FIND

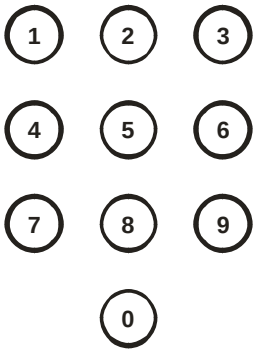
If there is a CD in the CD drive with previously stored images on it, the ViX05 will replay from the CD. Otherwise, the ViX05 will replay from the built-in hard drive.

4.1 FIND-1 Date/Time

This mode finds images by date and time. Press this key to enter the Date/Time search mode:

Sometimes it is useful to press the **TAG** key when in search mode, to call up the latest available recorded images

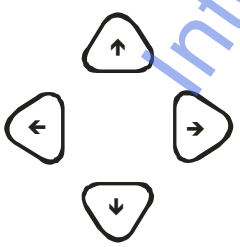
Use the **NUMBER** keys to enter any date and time for which there is still video available.



The format for the date and time is **DD/MM/YY HH:MM:SS** where:

- DD is the day of the month (00 to 31),
- MM is the month (01 to 12),
- YY is the year (e.g. 04 for the year 2004),
- HH is the hour in 24-hour format (00 to 23),
- MM is the number of minutes past the hour (00 to 59) and
- SS is the number of seconds past the minute (00 to 59).

Scroll through dates and times using the **ARROW** keys:



Note that as any digit of the date and time is changed, the corresponding image is immediately found on the hard drive and displayed.

This is the “active search” facility.

When you have found what you want, use the play keys to view the video:

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4.2 FIND-2 Sweep

An alternative to the date/time search is the sweep facility. Press this key until the sweep mode is displayed:

Use these keys to scan through the whole range of recorded images:

To step in finer time increments, press the **OK** key to access the fine mode.

Note that the slider changes from a solid block to a magnifying glass icon.

Press again to cancel.

To quickly step between start, middle and end, press this key:

When you have found what you want, use the play keys to view the video:

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4.3 FIND-3 Event List

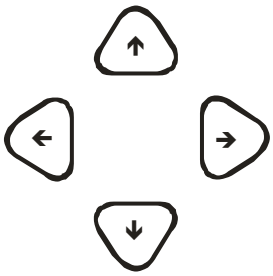
When activity detection or alarm contacts are being used, events will be created in the event list. This screen allows you to quickly find an event and play the video associated with it.

Press the **FIND** key until the **FIND-3** screen is displayed:

System events and critical alerts also appear in the event list.

Entering the EVENT screen clears any critical alert conditions. If a critical alert problem still exists, new alert events will be created.

Use the up/down keys to scroll through events and the left/right keys to select different pages of events.



Millions of events can be recorded before older ones are over-written.

As events are highlighted, the corresponding image will be immediately recalled and displayed if it is still present on the hard drive(s).

Press this key to go to the latest event:

When you have found what you want, use the play keys to view the video:

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4.4 FIND-4 Incidents

If one or more incidents have been set (refer to BURN, section 6) they can be selected and replayed via this screen. This is particularly relevant when playing a CD.

Press the **FIND** key until the **FIND-4** screen is displayed:

When playing from a CD, all the stored video is within one or more incidents. This screen allows you to select which incident to play.

To select the incident you wish to replay, use these keys:

To play the incident forwards from the start, press the “play forward” key:

To play the incident backwards from the end, press the “play backwards” key:

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5 PLAY

- **If there is a CD in the CD drive with previously stored images on it, the ViX05 will replay from the CD. If the CD has more than one incident, use the FIND-4 screen to select each incident (see section 4.4).**
- **If there is no CD in the CD drive, the ViX05 will replay from the built-in hard drive.**

Having found what you want using the **FIND** key, you can use these keys to move forwards and backwards through the recorded video images.

The function of each key is:

Step backwards one image

Step forwards one image

Play backwards (press again to increase speed)

Play forwards (press again to increase speed)

Pause at currently displayed image

To select the most recent or earliest recorded image, press one of these keys:

When unit is in playback mode you can also using the function menu 15 zoom command to zoom in on a specific area of replay.

Press the forward or reverse play keys repeatedly to increase the replay speed.

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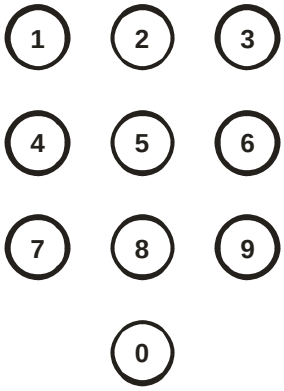
View different cameras by pressing the **NUMBER** keys:



5.1 Play Events

Press these keys to step backwards or forwards through events in the event list:

5.2 Play Incidents

Press these keys to step backwards or forwards through incidents in the incidents list:

5.3 Tagging Images

If you have found an image or section of video that you may wish to go back to, press the TAG key to create an event in the event log. This makes it easy to get back to the same point using the **FIND-3 Events** screen.

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6 BURN

To burn a section of video recording to CD you must go to the middle the video that you wish to backup, using the FIND and PLAY facilities as described in sections 4 and 5. Then do the following:

6.1 BURN-1 Edit Incident

Call up the **BURN-1** screen by pressing this key.

If there is a CD in the CD drive that is *not* blank, the BURN screen will not be displayed.

Create an "incident" by pressing this key.

Change the duration of the incident as required using the left/right keys:

The start and end times can also be individually adjusted by using the **UP** and **DOWN** arrow keys to highlight the start or end times, and the **LEFT** and **RIGHT** keys to adjust the time.

Alternatively if you highlight the start time and press **TAG** it will be set to the current play image. Similarly if you highlight the end time and press **TAG** it will be set to the current play image.

Press the "Open CD drawer" button on the CD drive and place a *new* CD-R in the CD drive. Press the "Open CD drawer" button again to close the drawer.

Start writing to CD by pressing this key:

Note that you can only write incidents to a *blank* CD. **When an important incident has been written to a CD, always check that the CD plays back correctly**, either by playing it on the VIX05 or on a PC.

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6.2 BURN-2 Multiple Incidents

Up to 10 incidents may be set before burning to CD. Use the **BURN-2** screen to manage multiple incidents and the **BURN-1** screen to edit individual incidents.

Use the **BURN** key to switch between the **BURN-1** and **BURN-2** screens:

While in the **BURN-2** screen, use these keys to highlight an incident:

Use these keys to select whether you wish to include the highlighted incident when you burn to CD:

Use the **BURN** key to return to the **BURN-1** screen to set a new incident or to alter the length or times of an incident.

While in the **BURN-2** screen, start writing all selected incidents to **CD** by pressing this key:

Note that you can only write incidents to a *blank* CD. **When an important incident has been written to a CD, always check that the CD plays back correctly**, either by playing it on the VIX05 or on a PC.

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7 PSW (Passwords)

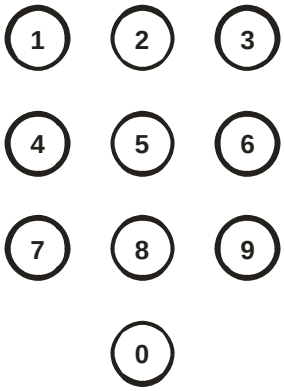
Passwords may be set in the menu to prevent unauthorised access to various features of the ViX05. Which features that are protected by each password may be defined in the **CONFIGURATION** menu.

7.1 Log-On

To log-on to the ViX05 and thereby gain access to functions protected by the password:

Press this key:

Enter the correct password using the **NUMBER** keys:



Note that all 6 digits must be entered even if the leading ones are zeros/

Press this key:

A message on the screen will indicate whether user access has been granted. Four different passwords may be set up, each with different rights. Note that you may be granted access but still have insufficient rights to access some features of the ViX05.

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7.2 Log-Off

When you have finished accessing password-protected features, you should log-off again to prevent other users gaining unauthorised access.

Press this key:

Press this key:

The password-protected features are now protected again.

Note that log off will occur automatically after 1 minute if no keys are pressed.

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8 FN (Functions)

8.1 Using Functions

The **FN** key provides access to functions as listed below. Press the **FN** key again as required to see the available functions listed on the screen.

To activate a function, first press:

Then enter the required function number (1, 2 or 3 digits)

When you have the required number, press the **OK** key to finish.

8.2 Repeating last used Function

To repeat the last function used, press:

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9 MENU

Please note that the following menu items may differ slightly between models depending on which features are available.

The menu system in this DVR allows many aspects of it operation to be customised to suit a specific installation.

The factory default settings that this unit is shipped with provide a standard configuration that records all connected cameras continuously with a data retention period of 31 days.

The factory defaults may be restored at any time via the CONFIGURATION menu.

If you need to deviate from the factory defaults, navigate through the menu using these keys:

[v] Select the next menu item

[^] Select the prior menu item

[>] Go a level deeper into the menu

[<] Come out of a level in the menu

[TAG] Select the default setting of a menu item

[MON] A quick exit when in the middle of editing

When editing a string such as a camera title, you can use the [Inc] and [Dec] keys to insert and delete characters.

In some cases, the [OK] key needs to be pressed to start an action within the menu.

9.1 Date/Time

Press [OK] to start editing the date and time.

Enter the current date and time using the [0-9] keys.

Use the [<]and [>] keys to move between the digits as required if you do not want to re-enter the whole date and time.

The required format is DD/MM/YY HH:MM:SS.

Press [OK] when you have finished editing the date and time, or press [MON] to cancel.

It is essential for the correct operation of this DVR that The current date and time is set in its internal clock. All recorded images are date and time stamped so this information forms part of the recorded evidence.

Battery backup ensures that the clock continues working even when power is removed for short periods of time. If there is an invalid date-time in the internal clock, the date/time entry screen will automatically appear on the screen. It may also be accessed at any time via the menu.

The internal clock will, like any clock, drift a little over time and will need setting from time to time. If you want perfect accuracy all the time, consider installing a Vi-GPS satellite receiver.

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Summer/Winter Time

When this option is set to Automatic, the internal clock automatically moves forwards an hour during March and back an hour in October for daylight saving. No adjustment by the user is required when the clocks change. The times and dates suit most European countries.

The Summer and Winter time modes may also be set manually if required.

9.2 Record

This part of the menu lets you define the period that images are retained for, the rate and the image quality of recorded images.

It also includes timers so that recording can be started and stopped at various times of day, or the record rate can be altered at various times of day. Separate weekday and weekend timers are provided so that weekends can be treated differently to weekdays.

Auto Record Mode

The AUTO record mode is the default record mode that allows you to simply specify how many days you wish images to be retained for. The DVR will do all the necessary image rate calculations to make sure that this is achieved.

Non-Alarm Record Settings

These menu settings apply when no alarm or activity event is in progress.

Days

Set the number of days that you wish images to be retained for before being over-written.

The rate at which images are recorded will be adjusted automatically to achieve this period.

If a longer retention period is selected, the rate at which images are recorded will slow down.

If a shorter retention period is specified, the rate at which images are recorded will speed up (up to the maximum of the DVR).

The hard drive capacity also affects the image rate for a given retention period, a larger drive capacity resulting in a quicker record rate.

Image quality also affects record rate, a higher quality being at the expense of reduced record rate.

Use the INFO-4 screen to see the actual image rate, accessed by pressing the [MON] key 4 times while in the HELP mode.

Non-Alarm Cameras (Auto)

Use the [>], [<], [^] and [v] keys to select which cameras that are to be recorded in non-alarm conditions.

Normally, all blocks should be set such that all connected cameras are recorded.

Use the [TAG] key to set the default state.

Record Timers

Recording may be restricted to certain times of day. These times may be different for Weekdays and Weekends.

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Weekday Record Times
Turn the block on to specify when recording is to occur on Monday, Tuesday, Wednesday, Thursday and Friday.

The normal setting is to have all blocks on for continuous recording.

Press [TAG] to default this setting.

Weekend Record Times
Turn the block on to specify when recording is to occur on Saturday and Sunday.

The normal setting is to have all blocks on for continuous recording.

Press [TAG] to default this setting.

Alarm Record Settings
These menu settings apply when an alarm or activity event is in progress.

The occurrence of alarms is unpredictable so the data retention period is affected by alarms.

Rate
This specifies the overall image rate that is used when an alarm or activity event is in progress. The rate is shared between cameras.

Alarm Cameras (Auto)
Under alarm conditions, this option specifies whether all cameras are recorded or just those with alarms.

To ensure full security coverage, it is recommended that all cameras are selected.

Custom Record Mode
If custom record mode is selected, image pretension set by number of days is no longer used.

Instead, the installer is responsible for setting the record rate on each camera.

Different rates may be selected for day and night. The day and night times may be different for weekday and weekends.

In addition, different rates may be set for use under alarm conditions.

Enable Custom Mode
Set to YES only if you wish to use custom mode rather than the auto record mode.

If you select custom mode, you must set record rates for each camera under day and night, non-alarm and alarm conditions. The time for which images will be retained is dependent on these rates and is indicated on the rates setup screen.

Day/Night Timers
These timers specify what is considered day and night by subsequent options. Weekdays and weekends are treated separately.

Day and night may be considered as just two different time periods rather than actually day and night. For example AM and PM, if this happened to be more relevant to the particular installation.

Weekday Daytime
Highlight each hour that is to be considered as daytime during weekdays.

use the [TAG] key to toggle all hour blocks on and off.

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Weekend Daytime
Highlight each hour that is to be considered as daytime during weekends.

Use the [TAG] key to toggle all hour blocks on and off.

Non-Alarm Record Rates
These menu settings apply when no alarm or activity event is in progress.

Day
The non-alarm daytime record rate for each camera is set here.

If the requested rates cannot be achieved, the DVR will scale down all rates such that they can be achieved. The actual rate are displayed in square brackets [].

Note that cameras with activity detection enabled are given a rate of at least 1 picture per second (pps)and those with remote access in progress, a rate of at least 3 pps.

[<][>] Move cursor to each camera

[^][v] Change rate by whole numbers

[+][-] Change rate by fractional amount

[TAG] Default rate to zero (Off) or maximum

[OK] Copy rate of this camera to all others

Night
The non-alarm night-time record rate for each camera is set here.

If the requested rates cannot be achieved, the DVR will scale down all rates such that they can be achieved. The actual rate are displayed in square brackets [].

Note that cameras with activity detection enabled are given a rate of at least 1 picture per second (pps)and those with remote access in progress, a rate of at least 3 pps.

[<][>] Move cursor to each camera

[^][v] Change rate by whole numbers

[+][-] Change rate by fractional amount

[TAG] Default rate to zero (Off) or maximum

[OK] Copy rate of this camera to all others

Alarm Record Rates
These menu settings apply when an alarm or activity event is in progress.

Day
The alarm daytime record rate for each camera is set here.

Note that these setting only apply to those particular cameras with alarm status. The requested rates for other cameras will be as per the non-alarm settings.

If the requested rates cannot be achieved, the DVR will scale down all rates such that they can be achieved. The actual rate are displayed in square brackets [].

Note that cameras with activity detection enabled are given a rate of at least 1 picture per second (pps)and those with remote access in progress, a rate of at least 3 pps.

[<][>] Move cursor to each camera

[Inc][Dec] Change rate by 5pps steps

[^][v] Change rate by whole numbers

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[+][-] Change rate by fractional amount

[TAG] Default rate to zero (Off) or maximum

[OK] Copy rate of this camera to all others

Night

The alarm night-time record rate for each camera is set here.

Note that these setting only apply to those particular cameras with alarm status. The requested rates for other cameras will be as per the non-alarm settings.

If the requested rates cannot be achieved, the DVR will scale down all rates such that they can be achieved. The actual rate are displayed in square brackets [].

Note that cameras with activity detection enabled are given a rate of at least 1 picture per second (pps)and those with remote access in progress, a rate of at least 3 pps.

[<][>] Move cursor to each camera

[Inc][Dec] Change rate by 5pps steps

[^][v] Change rate by whole numbers

[+][-] Change rate by fractional amount

[TAG] Default rate to zero (Off) or maximum

[OK] Copy rate of this camera to all others

Alarm Cameras (custom)

Under alarm or activity conditions, you can select here whether all cameras are recorded or just those with alarms or activity.

Quality

Each camera may be assigned a different image quality. As you change the quality, you can see the effects on the visible parts of the image.

A higher image quality (size) results in more disc space being used for a given record rate (or slower update for a given data retention period).

Conversely, a lower image quality (size), results in less disc space being used for a given record rate (or faster update for a given data retention period).

[<][>] select camera

[^][v] Adjust quality

[TAG] Set defaults

[OK] Make all camera the same

Image Size Control

This is a global setting for image size that affects the recorded image quality of all cameras.

When you have selected this overall image size, go into the Quality menu where you can individually adjust camera quality and see the effects.

Audio Sensitivity

If audio record has been enabled in the CONFIGURATION menu, this setting adjust audio sensitivity.

Do a test recording to check that audio is being recorded satisfactorily.

If clipping distortion is apparent, reduce sensitivity.

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If on the other hand, the audio is masked by background noise, try increasing the sensitivity.

or altering the location of the microphone.

Monitor Live Audio

This setting determines whether live audio is output to the speaker on not.

If the microphone is close to the speaker then audio feedback may occur if this option is enabled.

9.3 Display

This section of the menus deals with settings that affect the appearance of the displayed images and associated text.

Titles

Titles allow meaningful descriptions to be entered identify the DVR and the cameras. Titles may be entered either via the built-in keypad, or via a PC keyboard that may be plugged directly into some Videoswitch DVR models.

Location

This text string describes the DVR or its location. This is useful when remotely accessing the DVR via Ethernet. It is also used to identify the DVR when it is set up to send emails.

Use these keys to enter and edit the text:

[>] Move cursor right

[<] Move cursor left

[^][v] Change character at cursor

[Inc] Insert a space at the cursor

[Dec] Delete the character at the cursor

[TAG] Set the default or blank title

[MON] Exit this menu setting

Camera Titles

To give a camera a title, select the required camera and use these keys to enter and edit the text:

[>] Move cursor right

[<] Move cursor left

[^][v] Change character at cursor

[Inc] Insert a space at the cursor

[Dec] Delete the character at the cursor

[+][-] Select a predefined title

[TAG] Set the default or blank title

[MON] Exit this menu setting

Show Camera Titles

You can choose how the cameras are identified on the main monitor in the various screen formats. This can be useful to avoid cluttering the screen too much.

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Full Screen Titles
Select whether you wish to identify the full screen camera by its number, by its title or not at all. Note that the camera number of the currently selected monitor is always displayed in the bottom right of the screen.

PIP Titles
Select whether you wish to identify the PIP cameras by number, by title or not at all.

Quad Titles
Select whether you wish to identify the QUAD cameras by number, by title or not at all.

x9 Titles
Select whether you wish to identify the 9-way multiscreen cameras by number, by title or not at all.

x16 Titles
Select whether you wish to identify the 16-way multiscreen cameras by number, by title or not at all.

Text Alignment
Use this menu option to adjust the position of the all the displayed text. This may be useful if you have a monitor that is over-scanning.

[<][>][^][v] Move position of text

[MON] Return to menu

Time/Date Position
Use this menu option to adjust the position of the Date and Time to suit you preference. Note that some locations may conflict with other text.

[<][>][^][v] Move position of Date and Time

[MON] Return to menu

Auto Sequence (Main Monitor)
The cameras displayed on the main monitor may be sequenced automatically

Sequence Mode
Select whether you want random sequencing, normal sequencing, or sequencing across multiple units (this last option only applies to models capable of supporting multi-unit configurations)

Camera List
Specify her which cameras you want to be included in the sequence.

[<][>] Move cursor to select camera

[^][v] Include/Exclude camera

[MON] Exit this level

A solid block indicates that a camera is included, a dash indicates that it is excluded.

Dwell Times
A separate auto-sequencing dwell time may be specified for each camera in this part of the menu.

[0..9] Enter a dwell time in seconds

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[<][>] Move cursor

[^][v] Scroll selected digit

[TAG] Set the default dwell time

[OK] Copy this dwell time to all cameras

Multi-Unit Sequencing
If you have enable multi-unit sequencing, the cameras to be sequenced on each unit should be set here.

Camera List
Select each unit in turn and specify which cameras are to be included in multi-unit sequencing.

[<][>] Move cursor to select camera

[^][v] Include/Exclude camera

[MON] Exit this level

A solid block indicates that a camera is included, a dash indicates that it is excluded.

Dwell Time
When multi-unit sequencing is selected, a common dwell time is used for all cameras.

[0..9] Enter a dwell time in seconds

[TAG] Set the default dwell time

PIP Mode

Spot Monitor Options
The spot monitor may be setup to automatically change camera or to change to auto-sequencing at different times of day.

Weekday Spot Daytime
Set the blocks on to indicate daytime hours during weekdays.

[<][>] Select hour of day

[^][v] Turn block on or off

Weekend Spot Daytime

Set the blocks on to indicate daytime hours during weekends.

[<][>] Select hour of day

[^][v] Turn block on or off

Day Spot Camera
This is the camera number that the spot monitor will display when the Spot Daytime starts, or if the unit powers up in the daytime.

[^][v] Select camera

[<] Exit this level

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Day Sequence Spot
This option specifies whether the spot monitor will auto-sequence when the Spot Daytime starts, or if the unit powers up in the daytime.

[^][v] Select auto-sequence

[<] Exit this level

Night Spot Camera
This is the camera number that the spot monitor will display when the Spot Daytime ends, or if the unit powers up in the night-time.

[^][v] Select camera

[<] Exit this level

Night Sequence Spot
This option specifies whether the spot monitor will auto-sequence when the Spot Daytime ends, or if the unit powers up in the night-time.

[^][v] Select auto-sequence

[<] Exit this level

Power-Up Options
When the DVR powers up, for example following a power loss, the following settings may be specified in the menu...

Main Monitor Format
Following power-up the main monitor screen format can be set to Full, PIP, Quad, x9 multiscreen or x16 multiscreen.

[^][v] Select format

[<] Exit this level

Sequence Main
Following power-up the main monitor may be set to auto-sequence.

[^][v] Select whether to auto-sequence

[<] Exit this level

Main Camera
Specify the full screen camera that will be displayed on power-up.

[^][v] Select camera

[<] Exit this level

PIP Camera
Specify the PIP camera that will be displayed on power-up if PIP mode has been selected.

[^][v] Select camera

[<] Exit this level

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9.4 Alarms

This DVR has a number of alarms inputs that may be connected to contacts, typically in PIR detectors. When an alarm occurs a number of actions may triggered, including:

- Add event to event log
- Send an Email
- Call an alarm center
- Change record rate
- Change cameras that are recorded
- Pull-up alarmed camera onto a monitor
- Call up a preset on a dome camera

Alarm Inputs
This sub-menu allows the alarm inputs to be set up.

Alarm Polarities
Alarm contacts may be set as normally open or normally closed.

If you select normally closed and nothing is connected to the alarm input, the system will register an alarm.

Camera Mapping
Normally alarm1 maps to Camera 1, Alarm2 to Camera2 etc.

Some models of Videoswitch DVR support alarm mapping whereby each alarm input may be assigned to any camera. Some cameras may therefore have multiple alarm input associated with them.

[^][v][<][>] use these keys to set the mapping

Preset Mapping
Some models of Videoswitch DVR have dome control. In these models, alarms may be mapped to presets so that when an alarm occurs, the dome goes to a particular preset position.

Alarm Timers
The alarms may be programmed to be operative only during particular hours of the day. These hours may be different for weekdays and weekends.

Weekday Alarm Times
Specify during which hours of each weekday the alarm inputs are active

[<][>] Move cursor to select hour of day

[^][v] Select whether alarm is active

A block indicates that the alarm is active, a dash that is it disabled.

Weekend Alarm Times
Specify during which hours of the weekend the alarm inputs are active

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[<][>] Move cursor to select hour of day

[^][v] Select whether alarm is active

A block indicates that the alarm is active, a dash that is it disabled.

Enable Alarms all day

This menu option allows some or all cameras to have their alarms enabled all day, irrespective of the Weekday and Weekend alarm time settings.

[<][>] Move cursor to select camera

[^][v] Select whether alarm is always active

Activity Detection

Activity detection may be enabled on any of the cameras. If movement is detected, a number of actions may occur, including:

Add event to event log

Send an Email

Call an alarm center

Change record rate

Change cameras that are recorded

Pull-up alarmed camera onto a monitor

Activity Zones

Activity zones may be selected for each camera to specify what area the image is to be monitor for movement.

[OK] Select/deselect zone at cursor

[<][>][^][v] Move cursor and select/deselect

[TAG] All zones on/off, default sens/pix

A "+" indicates that a zone is selected.

If activity is detected, this will become solid block.

As well as specifying the activity zones, you also need to specify the sensitivity and the number of pixels that need to be simultaneously active.

Enter two digits, [0..9] for sensitive and [0..9] for number of active pixels.

A higher sensitivity setting makes the unit more sensitive to activity.

The higher the pixel count, the less sensitive the unit will be to spurious triggering.

Activity Timers

The alarms may be programmed to be operative only during particular hours of the day. These hours may be different for weekdays and weekends.

Weekday Activity Times

Specify during which hours of the weekend the activity detection is active

[<][>] Move cursor to select hour of day

[^][v] Select whether alarm is active

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A block indicates that the activity is enabled, a dash that is it disabled.

Weekend Activity Times
Specify during which hours of the weekend the activity detection is active

[<][>] Move cursor to select hour of day

[^][v] Select whether alarm is active

A block indicates that the activity is enabled, a dash that is it disabled.

Enable Activity all day
This menu option allows some or all cameras to have their alarms enabled all day, irrespective of the Weekday and Weekend alarm time settings.

[<][>] Move cursor to select camera

[^][v] Select whether activity is always active

Display Active Pixels
Selecting this option causes activated pixels to be highlighted on the normal full screen.

This option is useful when setting up and performing walk tests, but would typically be turned off for normal operation.

[^][v] Select whether to display active pixels

Wireless PIR Inputs
UP to 64 wireless PIRs may be installed (for those models of Videoswitch DVRs that support wireless PIRS).

Wireless PIRs are particularly suitable for perimeter protection where the sensors are widely spaced and installing cabling would be inconvenient and expensive.

When a wireless PIR detects someone, the following actions may set set to occcur:

- Add event to event log
- Send an Email
- Call an alarm center
- Change record rate
- Change cameras that are recorded
- Pull-up alarmed camera onto a monitor
- Call up a preset on a dome camera

Wireless PIRs 1-16
The following menu options apply to wireless PIRS 1-16:

Enable PIRs
Specify which wireless PIRs are installed.

[<][>] Move cursor to select PIR

[^][v] Select whether PIR is installed

Weekday Times
Specify during which hours of the week the wireless PIR detection is active

[<][>] Move cursor to select hour of day

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[^][v] Select whether PIR is active

Weekend Times
Specify during which hours of the weekend the wireless PIR detection is active

[<][>] Move cursor to select hour of day

[^][v] Select whether PIR is active

Wireless PIRs 17-32
The following menu options apply to wireless PIRS 17-32:

Enable PIRs
Specify which wireless PIRs are installed.

[<][>] Move cursor to select PIR

[^][v] Select whether PIR is installed

Weekday Times
Specify during which hours of the week the wireless PIR detection is active

[<][>] Move cursor to select hour of day

[^][v] Select whether PIR is active

Weekend Times
Specify during which hours of the weekend the wireless PIR detection is active

[<][>] Move cursor to select hour of day

[^][v] Select whether PIR is active

Wireless PIRs 33-48
The following menu options apply to wireless PIRS 33-48:

Enable PIRs
Specify which wireless PIRs are installed.

[<][>] Move cursor to select PIR

[^][v] Select whether PIR is installed

Weekday Times
Specify during which hours of the week the wireless PIR detection is active

[<][>] Move cursor to select hour of day

[^][v] Select whether PIR is active

Weekend Times
Specify during which hours of the weekend the wireless PIR detection is active

[<][>] Move cursor to select hour of day

[^][v] Select whether PIR is active

Wireless PIRs 49-64
The following menu options apply to wireless PIRS 49-64:

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Enable PIRs
Specify which wireless PIRs are installed.

[<][>] Move cursor to select PIR

[^][v] Select whether PIR is installed

Weekday Times
Specify during which hours of the week the wireless PIR detection is active

[<][>] Move cursor to select hour of day

[^][v] Select whether PIR is active

Weekend Times
Specify during which hours of the weekend the wireless PIR detection is active

[<][>] Move cursor to select hour of day

[^][v] Select whether PIR is active

Camera Mapping
Each of the 64 wireless PIRs may be mapped to a camera. It will be this camera that is pulled-up in full screen.

Preset Mapping
Each of the 64 wireless PIRS may be mapped to a preset number. If the PIR is triggered, this preset will be called up on the camera to which the PIR is also mapped. This only applies do domes which have telemetry control.

Critical Alerts
Critical alerts are conditions that require user intervention.

If a critical alert condition arises, it is recorded in the event log.

A message is also displayed on the main monitor to alert the user attention is required.

Critical alerts are reset by pressing [OK] while viewing the event log.

Critical alerts arise if a hard drive fails, if a system self-test fails, or if video is lost from a user defined list of which input should have video.

Video Loss
Specify here which cameras should be present. If any lose video, a critical alert will be raised.

[<][>] Move cursor to select a camera input

[^][v] Select whether camera should be present

[TAG] Default to all currently connected cameras

Erase Event List
The event list can be erased here. Use with care as the events cannot be retrieved once erased.

Press [OK] to erase all events.

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Pull-Up and Restore
This part of the menu deals with the pull-up of a camera on a monitor under alarm conditions.

Pull-Up Monitor
Specify here on which monitor an alarm camera should be displayed.

Pull-Up Hold Time
When an alarm condition occurs the associated camera is displayed for this hold time, even if other cameras also have alarms meanwhile.

If other cameras have alarms these will then be displayed in turn, each one being shown for the specified hold time.

[0..9] Enter hold time

[<][>][^][v] Change hold time

[Tag] set default hold time

Sequence Time
When multiple alarmed cameras exist, once the hold time has elapsed for each, they will start sequencing with a programmable sequence time.

[0..9] Enter sequence time

[<][>][^][v] Change sequence time

[Tag] set default sequence time

Relay Hold Time
Whenever an alarm, activity or wireless PIR event occurs, the alarm relay activates. When all alarm conditions have cleared, the relay will stay activated until the relay hold time has expired.

When the record rate is modified by alarms, this condition will also apply until the alarm relay deactivates.

[0..9] Enter relay hold time

[<][>][^][v] Change relay hold time

[Tag] set default relay hold time

Restore Camera
Following the pull-up of one or more alarmed cameras, this setting determines whether the original pre-alarm camera is restored, or whether the last alarmed camera is left on the monitor.

[^][v] Select whether pre-alarm camera is restored

Restore Tour1
This setting determines whether Tour1 is invoked when an alarm condition clears.

[^][v] Select whether Tour1 is restored

Restore Preset1
This setting determines whether Preset1 is invoked when an alarm condition clears.

[^][v] Select whether Preset1 is restored

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9.5 Domes

The following section only applies to DVR models that support telemetry controlled domes or pan and tilt heads. DVRs that do not directly support dome control can by controlled directly by Videoswitch Joystick keyboards as they have the dome protocols built in.

Protocol set-up
Videoswitch DVRS that have built-in telemetry dome control provide two independent outputs. Domes with different protocols may be connected to each.

DOMES-1 protocol (twisted pair)
Specify here which protocol is to be applied to all domes connected to the DOMES-1 output

[^][v] Select protocol

DOMES-2 protocol (twisted pair)
Specify here which protocol is to be applied to all domes connected to the DOMES-2 output

[^][v] Select protocol

Up-the-coax protocol
Specify here which up-the-coax protocol is to be used.

Type of control for each camera
Each dome camera needs to be assigned to either: DOMES-1 output

DOMES-2 output

Co-ax telemetry control

Control via an external Vi-K2 keyboard

Dwell/Speed/Tour Settings
When setting tours or preset from within this menu, the following parameters may need to be set. All domes are different so these do not apply to all domes.

Dwell Time
This specifies the dwell time within a tour.

Speed
This specifies the speed at which the dome moves to a preset.

Include preset in tour
This specifies whether presets are to be included in a tour as they are programmed. This only applies to types of dome that use this method.

Preset Programming
Dome preset positions may be set here. Note that with some times of dome, the presets have to be set via the dome menu.

Go to Preset
This may be used to check preset positions. Some types of dome require that you call up a preset prior to setting its new position.

[^][v] Select preset

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[OK] Go to preset

Set Preset
[^][v] Select preset

[OK] Set preset to current position

Tour Programming
Dome tours may be set here. Note that with some times of dome, the tours have to be set via the dome menu. Use the FN key to start and stop tours.

If an alarm accours, tours will be suspended but can be re-instated after the alarm has finished. Refer to Alarm section.

Start Programming Tour
[^][v] Select a tour

[OK] Start programming tour

Add Preset to Tour
[^][v] Select a preset

[OK] Add preset to tour

Finish Programming Tour
[OK] Finish programming tour

DVR Driven Tours
As well as programming tours into the domes, the DVR can sequentially invoke presets to create a tour. This is done independently for each dome camera. Use the FN key to start and stop DVR driven tours.

No of Presets in Tour
Program the presets 1, 2, 3 etc into a dome that you wish to use for the tour. Use this menu setting to specify how many are to be sequenced.

Dwell Time
Specify here for how many seconds you wish to dwell on each preset before moving on to the next one.

9.6 Network

Images from this DVR can be remotely viewed and menus accessed via:

Telephone line - connect Vi PSTN module to the modem port.

Local area network - connect to the Ethernet port.

Broadband - connect a router to the Ethernet port.

IP Address
If you wish to use the Ethernet port for local or Ethernet access, you need to give the DVR an IP address.

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If the DVR is on a network with other computer equipment, a compatible number should be chosen. You may need to consult whoever is responsible for the network who can assign you a number.

If you are connecting only to a broadband router, the default IP address should be satisfactory. The router will also need setting. See our web site for details: www.videoswitch.co.uk

To set the IP address of the DVR:

[0..9] Enter IP address

[<][>] Move cursor

[^][v] Change digit at cursor

[TAG] Set default IP address

Note that the IP address consists of four numbers separated by dots.

Each number should be entered with no leading zeroes.

For example, an IP address might be: 192.169.0.2

Ports

The DVR has four IP ports. Port 4 has a fixed piort number of 80 and is used to send emails and alarm center messages. It can also be used for HTTP access. The other ports are used for remote access from the Vi-Viewer or other client software.

Port1

This port is used for remote access from the Vi-Viewer or other Videoswitch client software.

[0..9] Enter port

[<][>] Move cursor

[^][v] Change digit at cursor

[TAG] Set default port

Port2

This port is used for remote access from the Vi-Viewer or other Videoswitch client software.

[0..9] Enter port

[<][>] Move cursor

[^][v] Change digit at cursor

[TAG] Set default port

Port3

This port is used for remote access from the Vi-Viewer or other Videoswitch client software.

If a Vi-MPEG4 option module is being used via a router, set this port to 8080 typically so the router can direct HTTP access to the DVR (as well as to the Vi-MPEG4 module).

[0..9] Enter port

[<][>] Move cursor

[^][v] Change digit at cursor

[TAG] Set default port

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MPEG4 Port
This is the port number of an asscociated Vi-MPEG4 option module. Normally is would be 80, but if multiple systems are connected via a router and sharing a IP address, it will be necessary to set different port numbers for, each MPEG4 module and to enter the corresponding port number here.

[0..9] Enter port

[<][>] Move cursor

[^][v] Change digit at cursor

[TAG] Set default port

Sub-Net Mask
[0..9] Enter Sub-Net Mask

[<][>] Move cursor

[^][v] Change digit at cursor

[TAG] Set default Sub-Net Mask

Gateway
[0..9] Enter Gateway

[<][>] Move cursor

[^][v] Change digit at cursor

[TAG] Set default Gateway

Central Station
This DVR may be setup to make an IP call to a alarm central station when an alarm or critical alert occurs.

IP Address
Set the IP address of the PC running the alarm monitoring software:

[0..9] Enter IP address

[<][>] Move cursor

[^][v] Change digit at cursor

[TAG] Set default IP address

Port
Set the port you wish to use for the alarm monitoring software:

[0..9] Enter port

[<][>] Move cursor

[^][v] Change digit at cursor

[TAG] Set default port

Call Triggers
The following options determine under what conditions a call is sent:

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On Critical Alert
Enable this option if you want a call to be sent if a critical alert occurs

[^][v] Select whether calls are required

On Activity
Enable this option if you want a call to be sent if a activity occurs

[^][v] Select whether calls are required

On Alarm
Enable this option if you want a call to be sent if an alarm occurs

[^][v] Select whether calls are required

On Wireless PIR
Enable this option if you want a call to be sent if a wireless PIR alarm occurs

[^][v] Select whether calls are required

Email
This DVR may be setup to send an email when an alarm or critical alert occurs. The email can be sent to up to three different recipients.

The following settings need configuring:

Mail server IP Address
The IP address of your mail server must be entered here to enable emails to be sent.

If the DVR is on a network that includes a mail server, then the IP address of this should be entered.

If mail is sent and received directly via an internet service provider, then the IP address of the service provider's email server should be entered.

A Videoswitch utility Vi-resolve, downloadable from www.videoswitch.co.uk may be used to determine the IP address of your email server.

[0..9] Enter IP address of email server

[<][>] Move cursor

[^][v] Change digit at cursor

[TAG] Set default IP address of email server

#Recipient 1
Enter the email address of the person that you wish to be notified in case of an alarm or critical alert condition.

[<][>] Move cursor

[^][v] Change character at cursor

If the DVR model has an input for a PC keyboard, this is the quickest way to enter the email address.

Recipient 2
Enter the email address of a second recipient that you wish to be notified in case of an alarm or critical alert condition. Leave blank if not required.

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Recipient 3
Enter the email address of a third recipient that you wish to be notified in case of an alarm or critical alert condition. Leave blank if not required.

Email Triggers
The following options determine under what conditions an email is sent:

Status Reports
The DVR can send routine status reports to provide a confidence check that the system is operating correctly. Status report can be sent daily, weekly on monthly.

[^][v] Set report frequency

Status Report Time
The time of day that the routines status reports are sent can be set here:

[0..9] Enter time

[<][>] Move cursor

[^][v] Change digit at cursor

[TAG] Default

On Critical Alert
Enable this option if you want an email to be sent if a critical alert occurs

[^][v] Select whether emails are required

On Activity
Enable this option if you want an email to be sent if a activity occurs

[^][v] Select whether emails are required

On Alarm
Enable this option if you want an email to be sent if an alarm occurs

[^][v] Select whether emails are required

On Wireless PIR
Enable this option if you want an email to be sent if a wireless PIR alarm occurs

[^][v] Select whether emails are required

RS232
Some Videoswitcvh DVRs have an RS232 port that may be used for a varieny of purposes.

Remote access is possible via the PSTN telephone network using an external Vi-PSTN module. Note that image update is not as fast as broadband via the Ethernet port.

Mode
Specify here what the RS232 port is to be used for

[^][v] Select the RS232 mode

[TAG] Set default

Baud Rate
[^][v] Select the required baud rate

[TAG] Set default

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For a Videoswitch modem, the baud rate should be 115200.

PSTN rings
If a modem is being used, specify here how many rings should occurs before the DVR answers the call.

[^][v] Set number of ring

[TAG] Set default

RS232 Baud Rate
If the DVR is to be remotely controlled via an RS232 cable, the baud rate may be set here. For use with a modem the rate should be 115.2K baud.

[^][v] Set baud rate

[TAG] Set default

9.7 Configuration

This part of the menu deals with basic configuration of the DVR that is normally carried out only during installation.

Multi unit configuration
Some Videoswitch DVRs may be linked to produce larger systems. In this case each has to be programmed with a unit number and the total number of linked units.

In a multi-unit configuration, cameras are called up on a remote keyboard by entering the required camera number 1 to 256. The user does not see the boundary between units.

From a configuration point of view, each unit is treated separately, and settings can be different on each unit as required.

Unit Number
Multiple DVRs may be linked to provide a system with more than 16 cameras. Cameras 1 to 256 may then be called up using a remote keboard.

In multi-unit configurations, give each unit in the linked chain a unique number, starting at 1 for the master and incrementing by one for each subsequent unit.

In single-unit installations, set the unit number to none.

[^][v] set unit number

Number of Linked Units
Multiple DVRs may be linked to provide a system with more than 16 cameras. Cameras 1 to 256 may then be called up using a remote keboard.

In multi-unit configurations, each unit should be told the total number of inter-connected units in this option:

[^][v] set number of linked units

Simultaneous Control
If this option is set, in a multi unit configuration, all units will switch between live and play mode simultaneously.

If this option is not set, each unit can be controlled independently.

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Passwords
This DVR has a comprehensive method of password protection.

Logged Off Access Rights
Specify here what access right you wish to be available to users who do not enter a password.

[<][>] Move cursor to each type of access

[^][v] Set whether logged-off user has access

[TAG] Set default

User1
User 1 can be any category of user that you wish, for example the security guard.

User 1 Password
Specify here a numeric password for USER1.

[0..9] Enter password

[<][>] Move cursor

[^][v] Change digit

[TAG] Set default password

User 1 Access Rights
Specify here what access right you wish to be available to users who log on with the USER1 password.

[<][>] Move cursor to each type of access

[^][v] Set whether USER1 has access

[TAG] Set default

User2
User 2 can be any category of user that you wish, for example a supervisor.

User 2 Password
Specify here a numeric password for USER2.

[0..9] Enter password

[<][>] Move cursor

[^][v] Change digit

[TAG] Set default password

User 2 Access Rights
Specify here what access right you wish to be available to users who log on with the USER2 password.

[<][>] Move cursor to each type of access

[^][v] Set whether USER1 has access

[TAG] Set default

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User3
User 3 can be any category of user that you wish, for example a manager.

User 3 Password
Specify here a numeric password for USER3.

[0..9] Enter password

[<][>] Move cursor

[^][v] Change digit

[TAG] Set default password

User 3 Access Rights
Specify here what access right you wish to be available to users who log on with the USER3 password.

[<][>] Move cursor to each type of access

[^][v] Set whether USER1 has access

[TAG] Set default

User4
User 3 can be any category of user that you wish, for example the installer.

User 4 Password
Specify here a numeric password for USER4.

[0..9] Enter password

[<][>] Move cursor

[^][v] Change digit

[TAG] Set default password

User 4 Access Rights
Specify here what access right you wish to be available to users who log on with the USER4 password.

[<][>] Move cursor to each type of access

[^][v] Set whether USER1 has access

[TAG] Set default

Camera Inputs
The following options affect the camera inputs:

Brightness
It is important that the cameras are set up correctly to produce standard levels of video out.

However, if there is some loss due to long cable runs, this setting can provide compensation. This setting does not affect the spot monitor outputs.

If the cable runs are such that the loss is too great, launch amplifiers at the affected cameras end may be required.

Colour Boost
It is important that the cameras are set up correctly to produce standard levels of video out.

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However, if colour saturation is reduced due to long cable runs, it can be boosted here.

Termination
You can specify here whether individual camera inputs are terminated (with 75 ohms).

All camera inputs should be terminated unless they are looped through to other equipment that terminates them.

[<][>] Select camera input

[^][v] Turn termination on or off

[TAG] Turn termination on or off for all cameras

Record Audio
Select here whether you wish to record audio or not.

Altering this setting may affect video images that have already been recorded. It is therefore recommended that it is set either on or off during installation and not changed during normal operation.

Incident Filename
Incidents are given numeric filenames that automatically increment each time a CD is written to (burnt). This menu option allows the starting numeric filename to be specified.

[0..9] Enter a numeric filename

Restore Factory Defaults
If you press [OK] in this menu option, you will reset all menus options back to their factory defaults.

This can be very useful and is recommended after major software updates.

However is can undo a lot of work if significant customisation of the configuration has been undertaken.

Get Config from CD
When incidents are written to a CD, the configuration of the unit is also written.

This menu option allows a configuration to be retrieved from CD. This can be very useful when multiple sites need the same configuration.

Getting configuration from CD should only be performed on a DVR which is the same type and has the same software revision as the unit that created the CD.

Erase Hard Drive(s)
These menu options reset the drives to a clean starting point where no images, events of audio is retrievable.

Note that the erase operation actually only removes indexes, so the actual data will still be on the drives, although not accessible except with specialist equipment.

Erase Hard Drive 1
Press [OK] to perform a disc erase of hard drive 1.

Erase Hard Drive 2
Press [OK] to perform a disc erase of hard drive 2 (only available if the DVR has multiple drives).

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Erase Hard Drive 3

Press [OK] to perform a disc erase of hard drive 3 (only available if the DVR has multiple drives).

Erase All Hard Drives

Press [OK] to perform a disc erase of all fitted hard drives (only available if the DVR has multiple drives).

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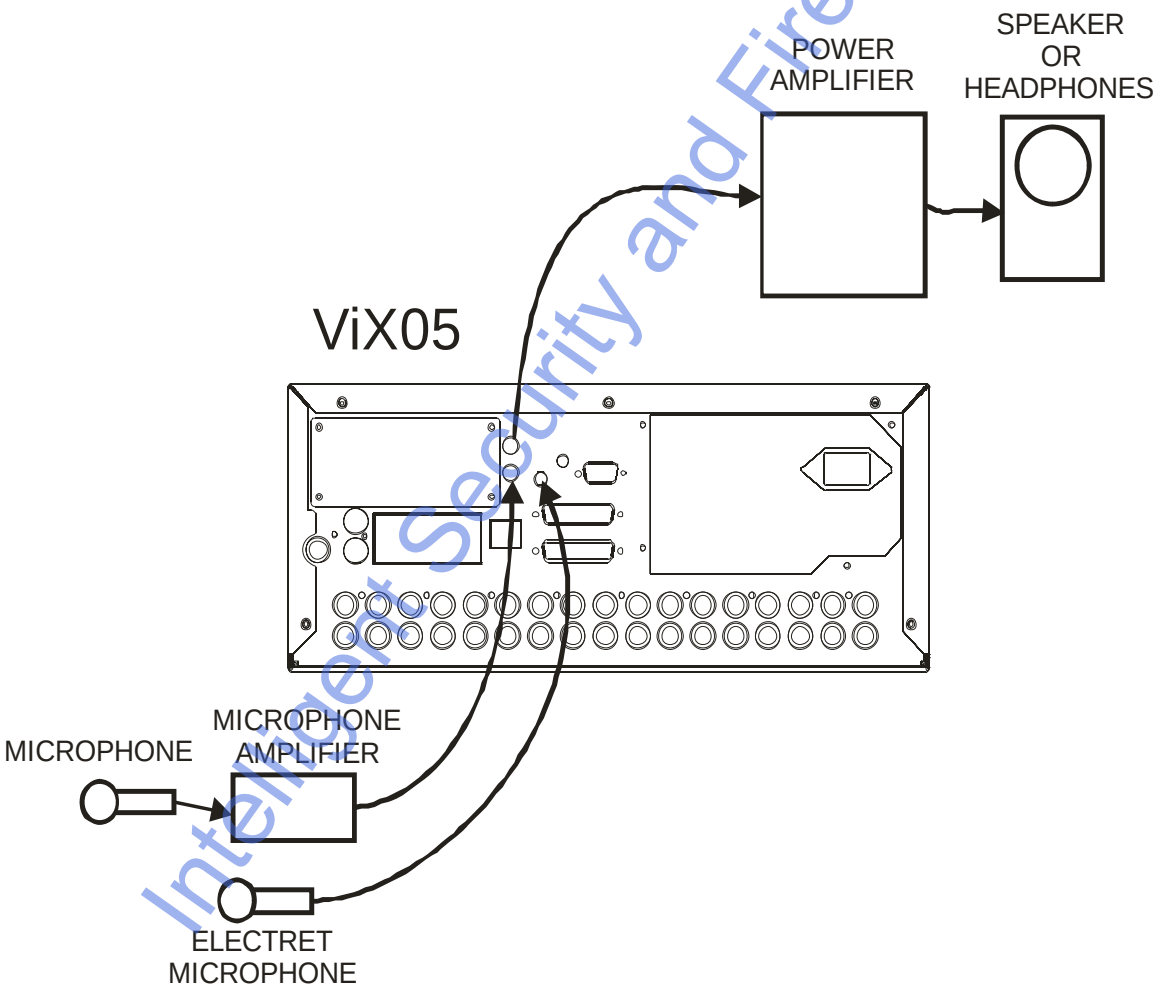
10 Connections

10.1 Audio

- Connect a microphone either directly to the MIC input or via a microphone amplifier to the LINE input.
- The LINE output is used to drive either a speaker with a built-in amplifier or a separate amplifier and speaker.



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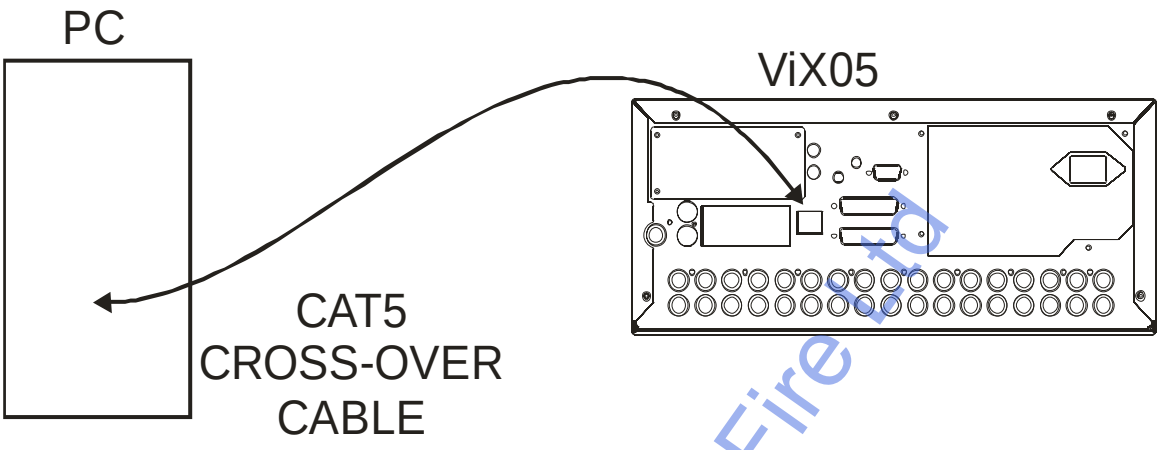
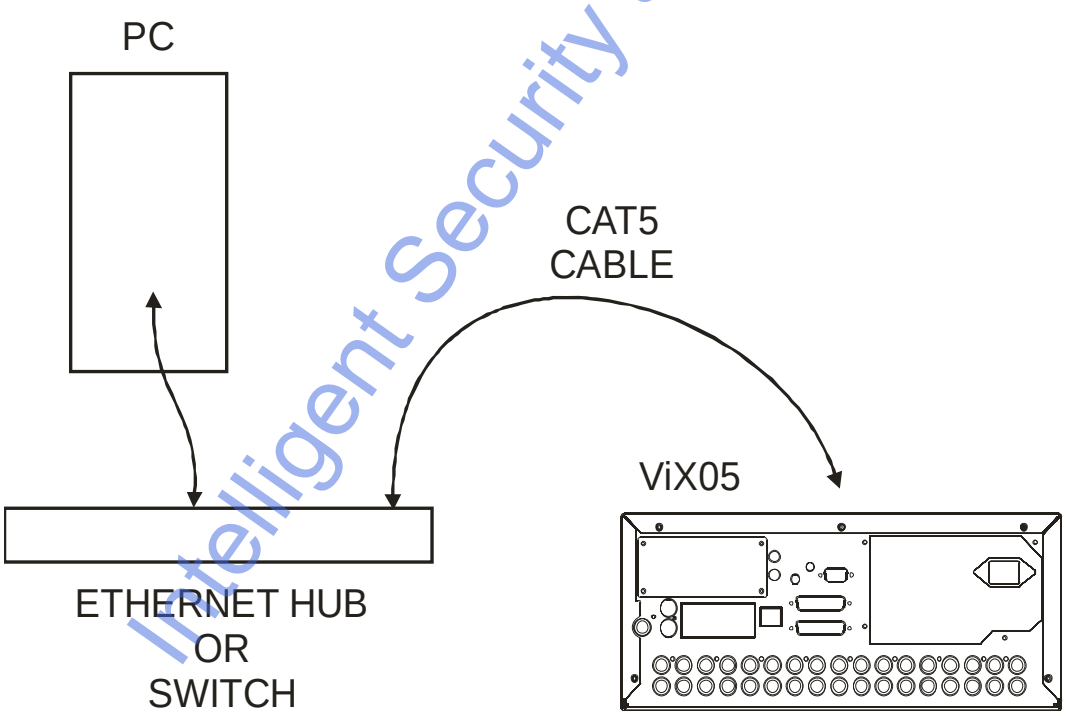
Note: Audio is not supported on the Vi302 or Vi305.

10.2 Ethernet connection to a PC



10.3 Ethernet connection to a LAN



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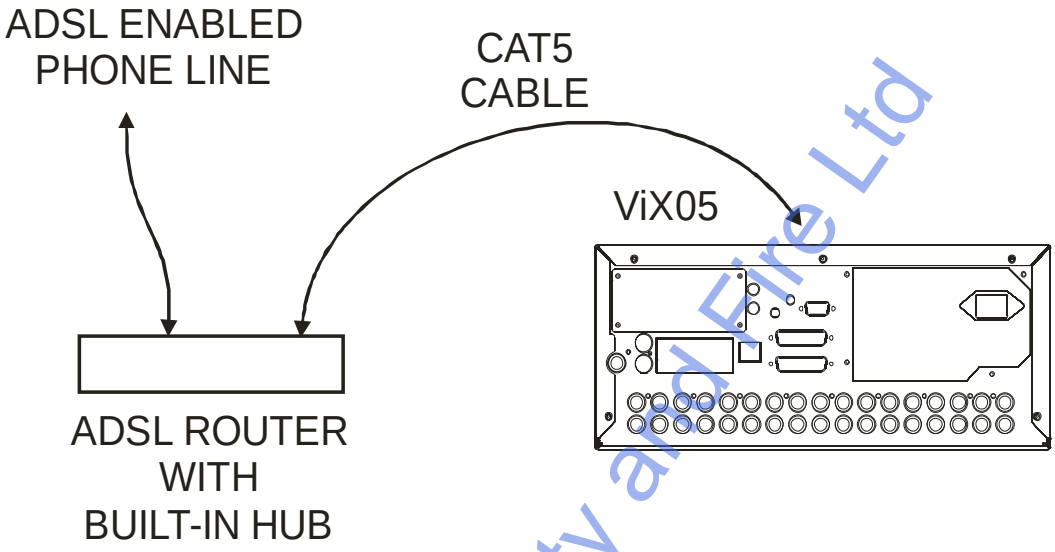
10.4 Ethernet connection to Broadband

Connection to broadband is via an ADSL router with one or more Ethernet ports.

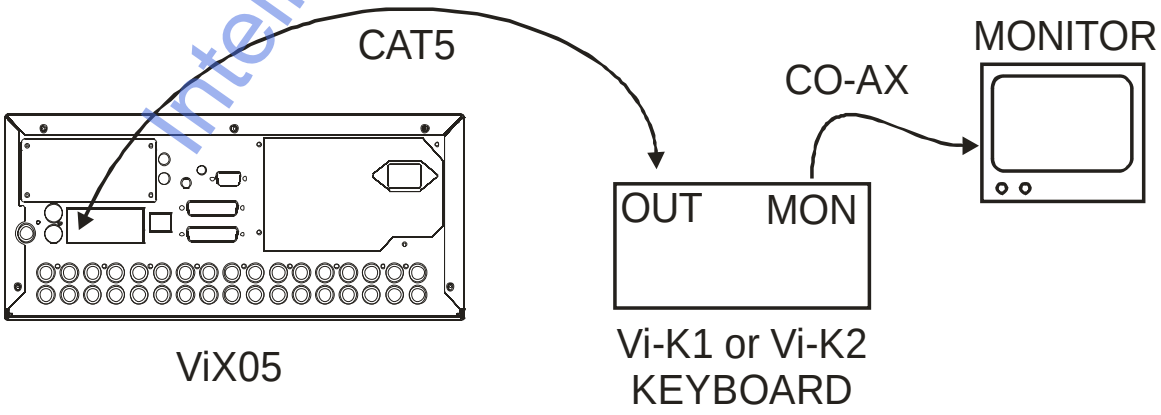


10.5 Remote Keyboard

Two remote keyboards may be connected to the ViX05 to provide control from another room. Simply connect the VIX05 to the keyboard using Cat 5 (or similar twin twisted pair cable).

Connect the keyboard to a monitor using a BNC co-ax cable. All the keys of the ViX05 are duplicated on the remote keyboard and the ViX05 may be controlled in the same way.

If the keyboard is more than about 100 metres away from the ViX05, then the monitor should be connected to the ViX05 separately via a BNC cable (RG59) to ensure best picture quality. The CAT5 data connection should operate up to 500 metres.



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- A keyboard connected to the Main Keyboard input will control the main monitor.
- A keyboard connected to the Spot Keyboard input will control the spot monitor.
- Keyboards may be daisy-chained if further control positions are required.

10.6 Dial-Up Access

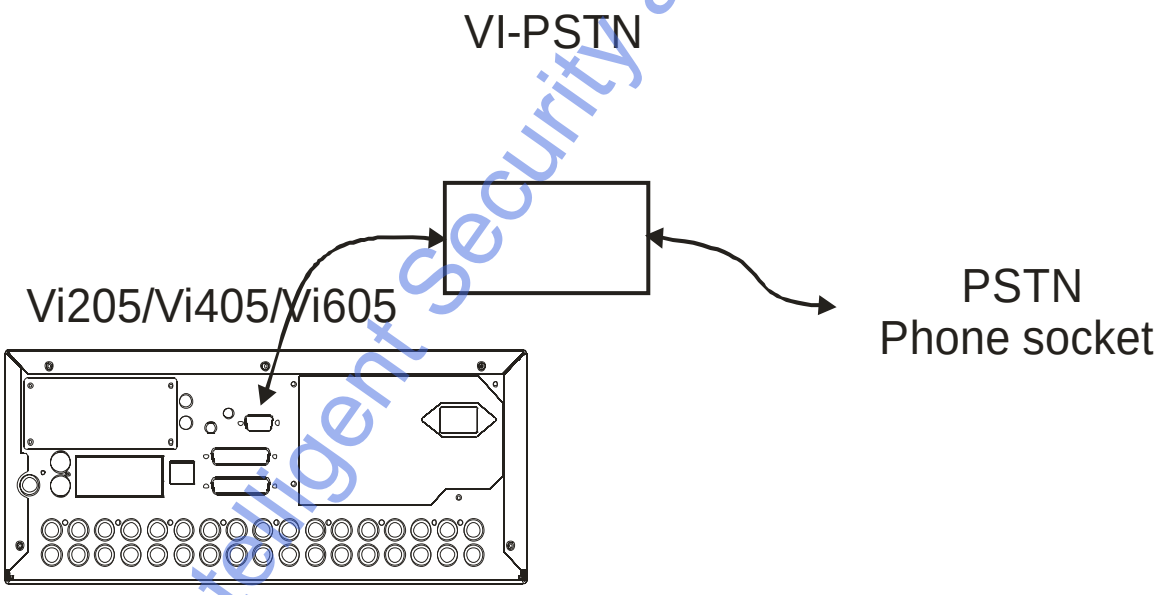
Images may be viewed on a PC via a telephone line (PSTN) if an optional external Vi-PSTN adaptor is attached.

"Vi-Connect" Software for the PC is available on the Internet: **www.videoswitch.co.uk**

A PC with a modem is required to view the images.

10.6.1 Connecting a Dial-up Adaptor

- Connect the adaptor to the telephone socket using the cable provided with the Vi-PSTN adaptor.
- Install Vi-Connect software in the PC that is to be used to dial into the ViX05. A modem must be fitted for PSTN use.



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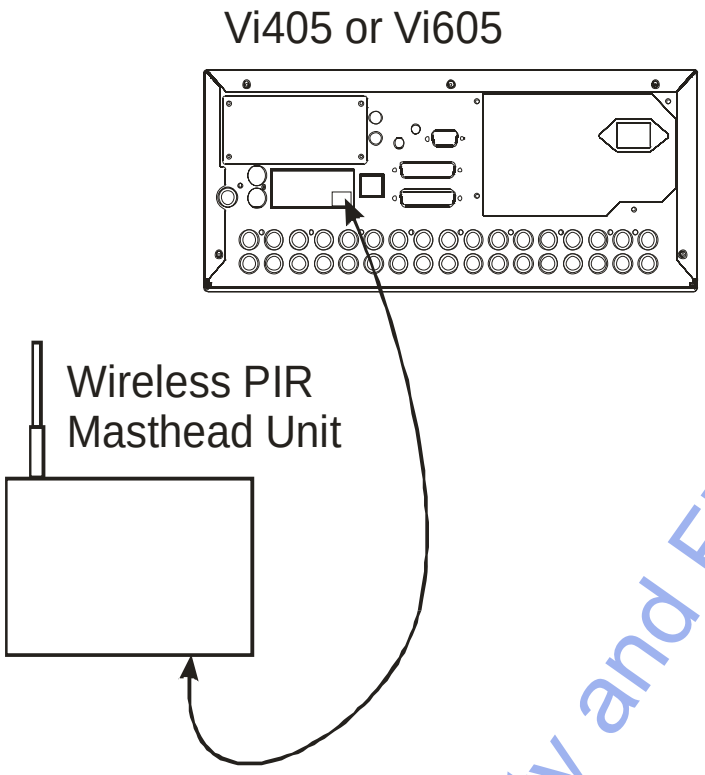
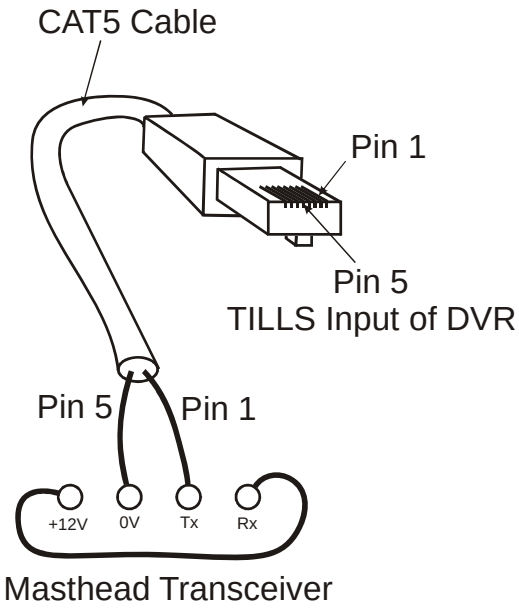
10.7 Wireless PIR

The Vi405 and Vi605 support up to 64 wireless PIR detectors via a masthead transceiver unit that connects to the TILLS input (see www.videoswitch.co.uk for details).



- Each of the external detectors must be configured with a different address
- Each PIR address that is to be used must be enabled in the DVRs **ALARM** menu
- Connect Wireless PIR Masthead Units to the TILLS input on the DVR as follows:

Masthead Unit (Transceiver) Screw Terminals	Vi405 or ViX05 DVR "TILLS" RJ45 Connector (CAT5)
TX	Pin 1
0V	Pin 5
Link +12V to RX	Not connected



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11 Technical Data

11.1 Power-On Reset

If you wish to perform a power-on-reset to restore all settings to their factory defaults, press the **TAG** key while you apply power, and keep pressing it until the ViX05 has powered up and displays **FACTORY RESET**. Note that this process will reset all user settings, including camera titles. The **TAG** key will need to be pressed for about 10 seconds.

The factory configuration can also be recalled via the **CONFIGURATION** menu.

11.2 Accessories Included

ViX05

Mains Cable

Vi-X2 Alarm Break-out module (Vi405, Vi605)

Vi-X3 Relay/Dome Break-out Module (Vi405, Vi605)

Vi-X4 Alarm/Relay Break-out module (Vi101, Vi205, Vi302, Vi305)

Hard Drive Key

Manual

CAT5 Ethernet Cable

Blank CDs

11.3 Changing the Hard Drive

Hard drives are sensitive mechanical devices that may be damaged by shock or vibration. Always protect them from shock and vibration when transporting.

Remove power from the ViX05 before removing the hard drive. **Wait for 30 seconds for the drive to stop spinning** before moving the ViX05 or removing the hard drive. Moving a drive that is still spinning can damage it.

The hard drive drawers require a special key to unlock them. This is supplied with the ViX05. Insert the key, and turn it *clockwise* to unlock the drive.

To put a hard drive back into the ViX05, make sure that the lock in the drive drawer is in the *unlocked* position. Carefully slide the drawer in as far as it can go with the handle in the up position. Carefully push the handle down such that the drawer is pulled into the drive bay. When it is properly located, lock the drawer by turning the key *counter-clockwise.*

After changing a drive, re-apply power to the ViX05.

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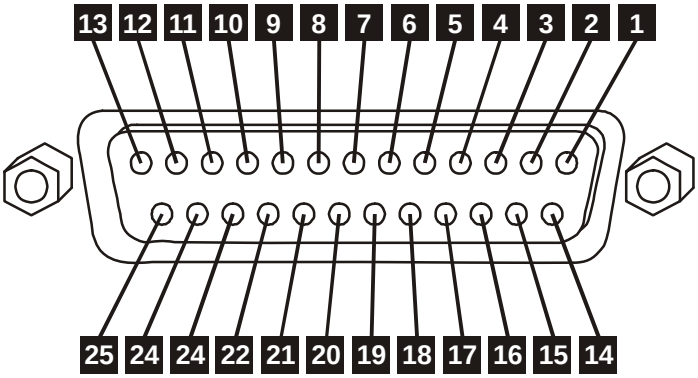
11.4 Connector Pin-Outs

11.4.1 Alarms (Vi101, Vi205, Vi302, Vi305)



Pin Number	Signal	In/Out
1	Alarm 1	In
2	Alarm 2	In
3	Alarm 3	In
4	Alarm 4	In
5	Alarm 5	In
6	Alarm 6	In
7	Alarm 7	In
8	Alarm 7	In
9	Alarm 8	In
10	Alarm 10	In
11	Alarm 11	In
12	Alarm 12	In
13	Alarm 13	In
14	Alarm 14	In
15	Alarm 15	In
16	Alarm 16	In
23	Relay 1	Out
24	Relay 2	Out
25	Alarm Common (Ground)	In

Note:

The Vi-X4 breakout adaptor supplied with the Vi101, Vi205, Vi302 and Vi305provides a convenient means of making connection to the alarm inputs via screw terminals.

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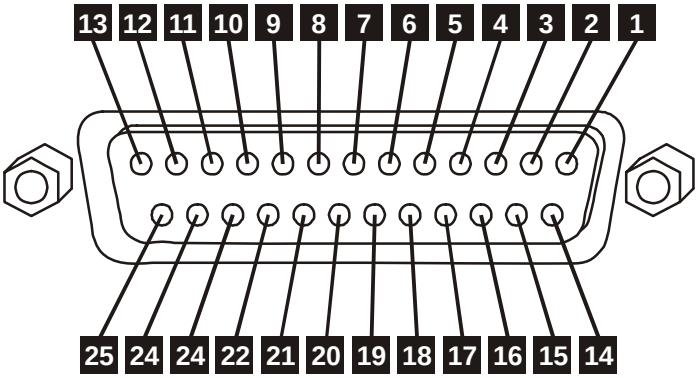
11.4.2 Alarms (Vi405 and Vi605)

Physical: 25-way D-Type (female)



Pin Number	Signal	In/Out
1	Alarm 1	In
2	Alarm 2	In
3	Alarm 3	In
4	Alarm 4	In
5	Alarm 5	In
6	Alarm 6	In
7	Alarm 7	In
8	Alarm 7	In
9	Alarm 8	In
10	Alarm 10	In
11	Alarm 11	In
12	Alarm 12	In
13	Alarm 13	In
14	Alarm 14	In
15	Alarm 15	In
16	Alarm 16	In
25	Alarm Common (Ground)	In

Note:

The Vi-X2 breakout adaptor supplied with the Vi405 and Vi605 provides a convenient means of making connection to the alarm inputs via screw terminals.

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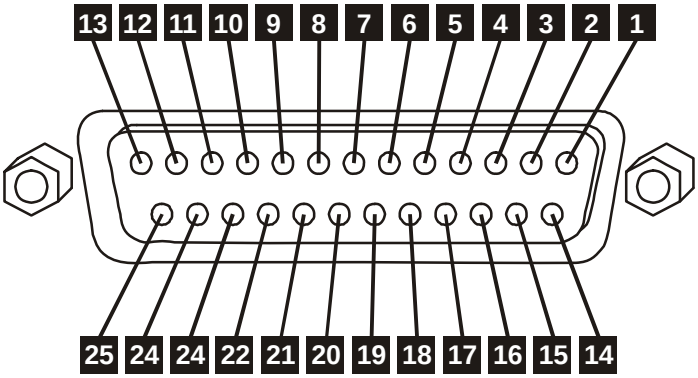
11.4.3 Relays (Vi405 and Vi605)

Physical: 25-way D-Type (female)



Pin Number	Signal	In/Out
1	Relay 1 (Alarms)	
2	Relay 2 (critical Alerts)	
3	Relay 3	
4	Relay 4	
5	Relay 5	
6	Relay 6	
7		
8		
9		
10	Dome 2 RS485 -	Output
11	Dome 1 RS485 -	Output
12	Dome 2 RS232	Output
13	Dome 1 20mA output	Output
14		
15		
16		
17		
18		
19		
20		
21	12V Led/Beeper power	Output
22	Dome 2 RS485 +	Output
23	Dome 1 RS485 +	Output
24	Dome 1 RS232	Output
25	Ground	Output

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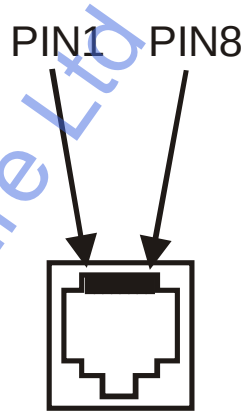
Note:

The Vi-X3 breakout adaptor supplied with the Vi405 and Vi605 provides a convenient means of making connection to the relay and dome outputs via screw terminals.

11.4.4 Remote Keyboards

Physical: RJ45

Electrical: RS485



Pin Number	Signal	In/Out
1	RS485+ (A)	In
2	RS485- (B)	In
3	Not used	N/a
4	+12V for Keyboard	Out
5	0V for keyboard	Out
6	Not used	N/a
7	Twisted-Pair Video+	Out
8	Twisted-Pair Video-	Out

Note:

A standard CAT5 patch cable may be used to connect the ViX05 to the optional Vi-K1 or Vi-K2 keyboard.

Note: The Spot 1 and Spot 2 outputs are not able to display different images, but provide a convenient means of having more remote keyboards.

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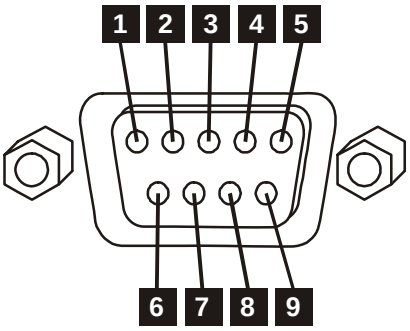
11.4.5 PSTN Modem

Physical: 9-way D-type (female)

Electrical: RS232



Pin Number	Signal	In/Out
1	DCD	In
2	RXD	In
3	TXD	Out
4	DTR	Out
5	GND	In/Out
6	+8V	Out
7	RTS	Out
8	CTS	In
9	RI	In

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11.5 Specifications

11.5.1 Storage

Hard drives	80 to 2250 Gbytes (and more as larger drives are developed)
CD writer	Quick and easy backup to CD-R using “BURN” key

11.5.2 Digital recording/Replay

Camera inputs	4, 6, 9, 10, 12 or 16, with programmable titles (16 characters)
Image Retention	1 to 999 days, image rate calculated automatically (custom mode allows time-lapse recording for up to 5 years)
Colour/Monochrome	Auto sense
Gain, Brightness, Colour	Adjustable via menu
Resolution	720 x 576 pixels x 16.8 million colours
Image size	6k to 40k bytes, dynamically variable, typically 18K
Compression method	Wavelet
Hardware/Software	Embedded RISC processor, proprietary Videoswitch operating system (non PC)
Simultaneous processing	Record, Live, Play, Remote and CD backup
Image authentication	every image is tagged with time, date, image number and other information and is protected with a digital security signature for authentication.
Video inputs	0.5 to 1V pk-pk, 75 Ohms (switch able via menu), composite PAL (BNC), all inputs have loop-through BNCs
Loop-Though	On Vi605
Maximum record rate	25 pictures per second (Vi302)
	50 pictures per second (Vi205, Vi305, Vi405 and Vi605)

1.1.1 Display

Main monitor output	Composite (BNC), 1V pk-pk composite PAL
Spot monitor outputs	BNC, 1V pk-pk composite PAL
Main monitor display modes	Full screen, PIP, quad, 9-way and16-way split (16 camera models only)
Auto Sequencing	1-99 seconds, full and quad, main and spot monitors
Covert (hidden)	any cameras may be hidden from view on the monitors

1.1.2 Control and Interface

Keypad	35 single function keys

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Remote keyboard Inputs	An input for each monitor. RJ45, RS485, 9600-baud (1 start, 8 data, 1 stop) data, with built-in balun for twisted pair video connection to remote keyboards with attached monitors
ASCII Keyboard Input	Plug in a PC keyboard for easy camera title setup (Vi405 and Vi605)
Passwords	4 passwords with fully programmable rights. Also programmable rights when not logged on.
Search modes	Date/time search, sweep, event list, and incidents
Timers	Record, alarm, activity and custom (weekday and weekend)
Audio Bandwidth	Single channel audio, 3.2kHz (optimised for speech)
Microphone input	3.5mm jack, -56dB, 20k Ohms, suits electret microphone
Line input/output	2 phono connectors, -30dB level, 47k Ohms
Audio sensitivity control	30db range, via menu
Alarm inputs	4 to 24 inputs, suit normally open or normally closed volt-free contacts, inputs mapped
Activity detection	16 x 12 zones, programmable sensitivity
Relays	1 relay (Vi101), 2 relays (Vi205, Vi302, Vi305), 6 relays (Vi405, Vi605)
Relay Contact Rating:	24Vdc, 200mA max normally open or closed
Alarm/activity response	Pull-up full screen display, maximum record rate
Events log	10,000,000 alarm, activity, and system and till events per hard drive
Incident list	Up to 10 incidents may be saved onto one CD
Till and bar code inputs	3 RS232 inputs for till and/or barcode reader data (Vi405 and Vi605). Expanders available for 8 or 16.
Atomic clock option	GPS satellite receiver input to synchronise clock (Vi405 and Vi605)
Watchdog timer	In the event of any unexpected condition, the system will automatically restart

11.5.2.1 Dome Control (Vi405 and Vi605)

Interfaces	RS485 (x2), Rs232 (x2), Up-the-Coax (x16)
Telemetry (coax)	BBV
Telemetry (twisted pair)	RS485, RS232 and 20mA. Protocols include JVC, VCL, BBV, Dennard, Sanyo, Samsung, Forward Vision, Mercer, Molynx/Bewator, Merit-LiLin, Borsatec, Pelco-D

11.5.3 Remote Viewing

Ethernet	100baseT, TCP/IP, suitable for connection to broadband router or LAN. Software supplied.

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Ethernet bandwidth	The data bandwidth used when streaming video is limited to a maximum of 1.6Mbits/second to prevent overloading the network.
PSTN (option)	Adaptors are available for dial-up remote access
Remote viewing software	Vi-Viewer may be used on a PC running Windows 2000 or Windows XP.

11.5.4 Power, Physical & Environmental

Mains Power input	90-135 Vac 2 Amps or 180-265 Vac 1 Amp, 47-63Hz
Temperature	5 to 35deg C (operating), -10 to 40deg C (storage)
Humidity	5 to 95% non-condensing
Vi101	
Dimensions/Weight (Unit)	165mm x 200mm x 310mm (WxHxD), 6kg
Dimensions/Weight (Boxed)	275mm x 380mm x 475mm (WxHxD), 8kg
Vi205	
Dimensions/Weight (Unit)	165mm x 200mm x 310mm (WxHxD), 6kg
Dimensions/Weight (Boxed)	275mm x 380mm x 475mm (WxHxD), 8kg
Vi302, Vi305, Vi405	
Dimensions/Weight (Unit)	355mm x 100mm x 390mm (WxHxD), 7kg
Dimensions/Weight (Boxed)	480mm x 295mm x 580mm (WxHxD), 9kg
Vi605	
Dimensions/Weight (Unit)	355mm x 150mm x 390mm (WxHxD), 13kg
Dimensions/Weight (Boxed)	480mm x 295mm x 580mm (WxHxD), 16kg

1.1.3 Upgrades

Remote viewing Software	Remote viewing software (Vi Viewer) is available on the Internet: **www.videoswitch.co.uk**. It is also copied onto the CD each time incidents are written.
Firmware upgrades	Firmware upgrades will be made available on CD and the Internet (free of charge)
Camera Upgrades	If you have fewer than the maximum possible camera input for the model, an upgrade code can be purchased to enable the other inputs.
Hard Drive Upgrades	Replacement hard drives are available to increase the drive capacity.

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11.5.5 CE Marking

This product is CE marked. It has been fully tested and complies with 89/336/EEC Electromagnetic Compatibility and 73/23/EEC Low Voltage directives, and with EN 60950:2000 safety standards.

Warning: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

11.5.6 Ventilation

The ViX05 Digital Recorder has ventilation holes in the base, front and rear. Using internal fans, the unit creates a continuous flow of air through the unit to control the temperature of the disc drives and other internal components.

The ventilation holes must not be obstructed otherwise the lifetime and reliability of the system may be affected.

11.5.7 Safety

For warranty and safety reasons, the cover of this equipment must not be removed. There are no user serviceable parts inside.

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Serial Number of ViX05

Notes

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12 Warranty Fax-Back

Please fill-in and fax or post this form (or a copy) back to Videoswitch. This will enable us you to inform you of free upgrades when they become available. If this form is filled in fully and returned within 1 month of purchase the warranty on this product will be extended from 1 year to 2 years for no extra charge.

Serial Number of ViX05

(This is on the label under ViX05)

Your Name

Company Name

Address & Email

Date Purchased

Purchased From

Fax to:

01252-851296

Or Send to:

Videoswitch, Ocean House, Redfields Industrial Park, Redfields Lane

Church Crookham, Fleet, Hants GU52 0RD

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